

CLAIMS

1. A nuclear fuel assembly of the type comprising nuclear fuel rods (3) and a supporting skeleton (5) having two nozzles (7, 9), guide tubes (11) interconnecting the nozzles, and spacer grids (13) for holding the rods, which grids are secured to the guide tubes, the assembly being characterized in that it further comprises at least one lattice reinforcing device (21) for reinforcing the support skeleton (5), the lattice reinforcing device (21) being disposed between two spacer grids (13) and being secured to the guide tubes (11).
2. An assembly according to claim 1, characterized in that the nuclear fuel rods (3) are disposed in a substantially regular array, and in that the lattice reinforcing device (21) does not extend between the peripheral rods (3).
3. An assembly according to claim 2, characterized in that the lattice reinforcing device (21) does not extend between the peripheral layer (19) of rods and the adjacent layer (29) of rods.
4. An assembly according to any preceding claim, characterized in that the lattice reinforcing device (21) does not have means for mixing a cooling fluid that is to flow through the nuclear fuel assembly (1).
5. An assembly according to any preceding claim, characterized in that the lattice reinforcing device (21) does not have means for holding nuclear fuel rods (3).
6. An assembly according to any preceding claim, characterized in that the lattice reinforcing device (21) comprises two sets of crossed plates (23) that are secured to one another, the plates defining between them

cells (25) for receiving guide tubes and cells (27) for receiving nuclear fuel rods.

5 7. An assembly according to claims 5 and 6 taken together, characterized in that the cells (27) for receiving nuclear fuel rods (3) are of dimensions greater than the dimensions of the rods (3) so as to receive them with clearance.

10 8. The use, in a nuclear fuel assembly (1) comprising nuclear fuel rods (3) and a support skeleton (5), the assembly having:

- two nozzles (7, 9);
 - guide tubes (11) interconnecting the nozzles; and
 - 15 • spacer grids (13) for holding the rods;
- of at least one lattice reinforcing device (21) for reinforcing the support skeleton (5), the lattice reinforcing device (21) being disposed between two spacer grids (13) and being secured to the guide tubes (11).

20 9. The use according to claim 8, characterized in that the lattice reinforcing device (21) does not have means for mixing a cooling fluid that is to flow through the nuclear fuel assembly (1).

25 10. The use according to claim 8 or claim 9, characterized in that the lattice reinforcing device (21) does not have means for holding nuclear fuel rods.

30 11. The use according to any preceding claim, characterized in that the lattice reinforcing device (21) comprises two sets of crossed plates (23) that are secured to one another, the plates defining between them cells (25) for receiving guide tubes (11) and cells (27)
35 for receiving nuclear fuel rods (3).

12. The use according to claims 10 and 11 taken together,
characterized in that the cells (27) for receiving
nuclear fuel rods (3) are of dimensions greater than
those of the rods (3) so as to receive them with
5 clearance.